

NMI Directors Meeting 2016

Report from the Task Group for the Promotion of the Revised SI

Prof. Dr. Joachim Ullrich



Le Système
international d'unités
The International
System
of Units

SI

- **On the future revision of the International System of Units, the SI**

Resolution 1

The General Conference on Weights and Measures (CGPM), at its 25th meeting,

...

noting that further work by the Consultative Committee for Units (CCU), the CIPM, the BIPM, the NMIs and the CCs should focus on

- awareness campaigns to alert user communities as well as the general public to the proposed revision of the SI,
- the preparation of the 9th edition of the SI Brochure that presents the revised SI in a way that can be understood by a diverse readership without compromising scientific rigour,

that despite this progress the data do not yet appear to be sufficiently robust for the CGPM to adopt the revised SI at its 25th meeting,

1).

Proposal: the Structure of the TG

- *1st layer: SI Promotion Task Group*
 - optimize the participation of NMIs from different cultural and language backgrounds and different regions
 - current members + CENAM, INMETRO, NIM, NMISA, VNIIM
- *2nd layer: PR Expert Group*
 - limit size to make the group effective
 - experienced PR officers only

Confirmed by CIPM October 2015

Proposal: The Structure of the TG

CIPM

Reporting

Request for additional membership: CCEM, CCM, CCT, CCQM:

to be approved by CIPM

Request for additional observership: ILAC, ISO, OIML, IEC, CIE:

to be approved by CIPM

Comments and
approves

Develops plans and
key messages

PR Expert Group

Rapporteur / Secretary

(3-4 experienced press officers, BIPM)

Proposal: Terms of Reference of the TG

Mission:

- to identify and develop key tools to promote the revised SI among a wide range of different priority target groups
- identify and develop the most adapted communication tools and messages for each target group

Confirmed by CIPM October 2015

- **October 2015:**

Decision CIPM/104-40 The CIPM welcomed the work carried out by the Consultative Committee for Units (CCU) on the structure, composition and terms of reference of the SI Promotion Task Group and the Public Relations Expert Group. It nominated Dr Ullrich as Chair of the SI Promotion Task Group.

- **November 2015:** First Meeting of PR Expert Group (NIST, NPL, LNE, PTB)

Outcome:

- Proposal for timeline
 - Proposal for questionnaire for member states
 - Preparation of the first official meeting of the Task Group
- **January 2016:** First official meeting of the Task Group
 - **After January 2016:** information to all member states, distribution of questionnaires, collection of existing material

CIPM: Promotion of the “New SI”

**Task group for the promotion
of the “New SI” under
the auspices of
the CIPM:**

Outcomes of 1st

Meeting (January 2016)



Le Système
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SI

Objectives of the campaign

Physics of the Revised SI

- Each target group should understand the *basic physical principles*.
- If possible, the *role of fundamental constants* should be presented.

Messages beyond physics

- Explain that *continuity* is preserved for the end users.
- Explain the *fundamental changes*
 - triggering innovative techniques
 - enabling realizations with ever-improving accuracy.

PR campaign

- Identify which are *the most adapted communication tools* for each of the target groups.

Key messages

The SI is a world-wide endeavor and approach – it is a universal language of measurement. It will be the result of worldwide agreement at the General Conference (CGPM) in 2018. Metrology is a field where the states and economies of the world work together.

Using the rules of nature to create the rules of measurement – the use of constants in nature enable you to link from the smallest to the largest measurements quantities. It will tie measurements at the atomic (and quantum) scales to those at the macroscopic level. This introduces the appeal of a fundamental (“quantum”) basis for the changes.

The changes to the SI will provide a springboard for future innovation – The changes will mark an important step forward - scientific advances now offer the possibility to do better and to move forward whilst maintaining continuity for practical users.

Audiences Grid

Audience	Description of the group	How to reach these people?	Message
Policy makers /Opinion leaders	Small group of known people / Short attentions span / lack of technical knowledge	Reach them directly or via third party validators	How does the SI contribute to the health and the wealth of the nation How will it enable new technology and innovation Its role in globalization and digitization
General and Science interested public	Basic science literacy / self-motivated / curious / relationship with an NMI (family member or live locally)	Popular news media / social media / Newspaper with science correspondents / specialist Magazines / Open events	How does the SI affect me? A worldwide endeavor Springboard for future innovation Quantum Physics is cool
Teachers, lecturers	Educators of science interested students (14 to 21+)	Teachers / curriculum based materials /information for teachers / on-line resources These are likely to be very country specific	Introducing the measurement system Basic understanding of the physics Changes in the SI and the rules of nature Unified theory of measurement Completing the metrological jigsaw
Users of the SI	Know to the Laboratories / Customers of our labs / represent trade or organizational bodies	Customer databases / Heroes list / following via social media: Twitter, LinkedIn etc	Stability in the current system remains – it is not broken The new system provides future stability The changes could lead to interesting developments

Core products

What	Provided by the Task Group	Use by NMIs
Speakers tool kit	Talking points/Key messages Visuals – graphic, photos, art Frequently Asked Questions B-Roll – (video footage of key animations or experiments)	Ensure common messages to all audiences defined
Collateral	Logo and Brand guidelines Messages (which you could make a brochure from) WMD 2018 Poster (WMD Euromet) WMD 2018 director's statement CGPM Director Message for November	To use at the launch as part of World Metrology Day
Expert articles	Written articles from experts throughout the world covering the SI changes and the future applications they might deliver.	Used for a publication in media, websites, print
Video	Video headshot from through the world (in native language with English translation) on what the new SI means to them NMI directors or key scientists.	Used to create a “launch show reel” and key visual to demonstrate the international nature
Website	Support BIPM to upgrade their website to provide a front end for their campaign Develop a resource portal for all NMIs to use for materials	Definitive source of materials and the door to the SI
Educators resources	A shared recourse of materials – sources from within NMI – to support the education process.	For NMIs to adapt and use in country as appropriate

Time line



Main actions:

- Build the team – contributors and contacts in NMIs
- Test the messages and approach
- Find the resources (money)
- Agree the content of the tools kit
- Questionnaire to all NMIs
- Gap analysis of materials
- Brand Guidelines
- Build in-country commitment to the campaign

Main actions:

- Keep NMIs informed and warm them up
- Develop resources
- Share resources – enabling translation and production time
- Countries to prepare engagement plans for media, educators and users

Main actions:

- Launch date 20th May 2018
- Countries to share plans and implement local campaigns between May – November 2018
- Manage “one day” celebration within CGPM meeting
- Agree a way forward following the November meeting

Task group for the promotion

of the “Revised SI”

under the auspices

of the CIPM:

Member

Survey Results



SI Questionnaire / NMI Survey

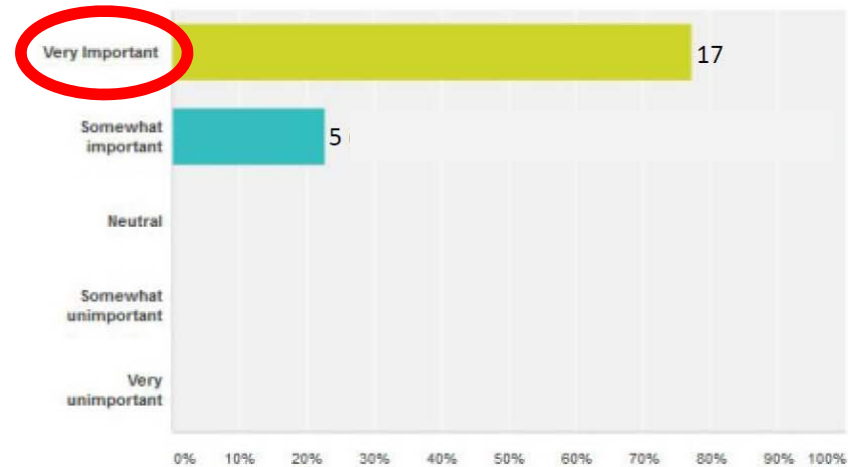
- NMI Survey: May 2016
- 21 (revised) responses

Result:

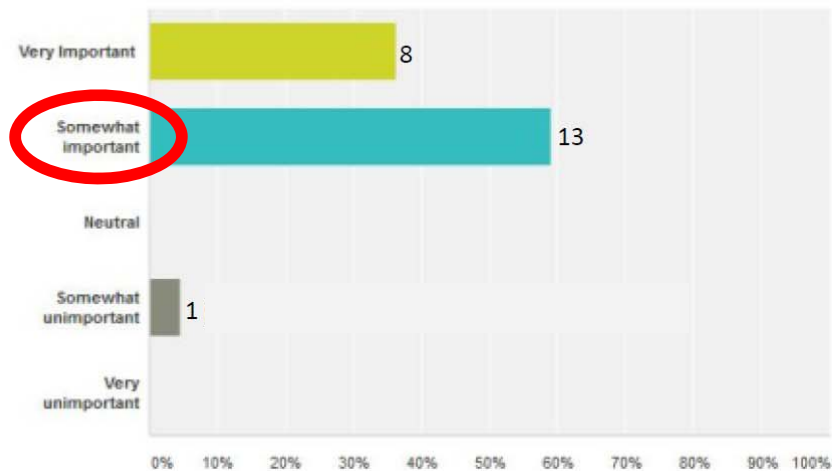
- Almost all contact persons named in the survey are **scientists or science managers**;
no communications or public relations experts have been appointed.
- the **scientific and technical** community seems to be the target for most of the NMIs.
- Above all, the **NMIs would like to obtain materials** which they can't produce by themselves. Thus the following key words are used remarkably often:
 - **video (19 times!),**
 - **explanatory material**, easy to understand, materials for pupils / students / public.

Member Survey Results

Q3: How important is announcement of the redefinition of the SI to the **scientific and technical community** in your country?



Q4: How important is announcement of the redefinition of the SI to the **public** in your country?



Member Survey Results

Q5

Please check which of the following activities your NMI is likely to conduct to help announce/celebrate redefinition of the SI?

Answered: 23 Skipped: 0



SI Questionnaire / NMI Survey

- NMI Survey: May 2016
- 21 (revised) responses

- The survey results show that there is a “big gap”

- **Hardly any existing** material for the promotion of the new SI

Material by NIST (example)



Project to
Develop, Produce, and Distribute
a Documentary Film
about Rebooting
the International Measurement
System

- \$500,000 (U.S.): funding by NIST
- target group: "science interested public"
- **Applications** must be received at Grants.gov no later than 11:59 p.m. Eastern Time, Monday, **September 26, 2016**
- "Support the film by making your staff and facilities available for possible inclusion in the film." (W. May)

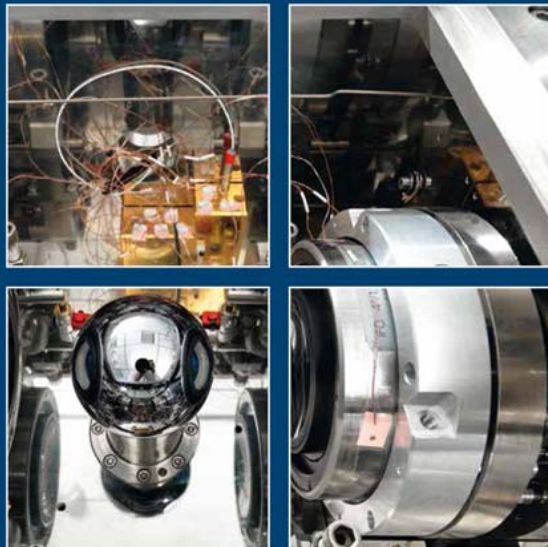
Material by PTB (example)

 PTB mitteilungen

2
2016

Experimente für das neue
Internationale Einheitensystem (SI)

nw 



- Overview articles (8 #, 107 pages) about **“Experiments to the new SI”**
- date of publication: September 2016
- target group:
(high school) teachers, students, ...
- original language: German
- Translation into English:
in preparation
- Download from www.ptb.de

Website at BIPM

CIPM Task Group for the Promotion of the New SI

Mission | Latest updates | TG members | On the future revision of the SI | Members' area

→ It is expected that the CGPM will adopt a substantial redefinition of the International System of Units (SI) in 2018. This will be an important event for the world-wide metrology community. It will require us all to communicate the technical consequences of the proposed changes to the way that traceability will be disseminated to users. It will also provide a special opportunity to increase awareness of the SI, promote metrology in general, and educate the general public about the importance of accurate measurement in daily life.

The Task Group will identify and develop key tools to support all Member States to promote the new SI among a wide range of different audiences. The Group will share communication tools and messages through this web page. The messages and tools will be available for Member States to use as they find appropriate.

The Group meets annually, with a PR Expert Group undertaking activities between meetings.

↘ CIPM: Upcoming meetings

📅 26-28 October 2016: 105th meeting of the CIPM

↘ The "New SI"

- Introduction: What, Why and When?
- The SI road-map
- FAQs: Frequently Asked Questions about the New SI
- Discussions on the New SI in the Consultative Committees

Summary of 2016

Task Group Meeting

21st of January 2016 at the BIPM

2016

Still the same main performers !

Messages, audiences, products (as proposed by the PR expert group) were all endorsed by the Task Group in January 2016

Main actions:

- Build the team – contributors and contacts in NMIs
- Test the messages and approach
- Find the resources (money)
- Agree the content of the tools kit
- Questionnaire to all NMIs
- Gap analysis of materials
- Brand Guidelines
- Build in-country commitment to the campaign

National efforts (NPL, NIST, PTB) / but no additional BIPM overhead !

NMI Survey: May 2016; 21 (revised) responses

„Big Gap“: Hardly any existing PR material !

In preparation by the BIPM & Fiona Auty

Non-existent !

Time line / Draft as of Nov 2015



Main actions:

- Build the team – contributors and contacts in NMIs
- Test the messages and approach
- Find the resources (money)
- Agree the content of the tools kit
- Questionnaire to all NMIs
- Gap analysis of materials
- Brand Guidelines
- Build in-country commitment to the campaign

Main actions:

? **What is a realistic approach?**
→ **To be discussed by the CIPM**

Main actions:

.....

end

Proposal: Terms of Reference of the TG

Duties:

- To comment on and approve the work of the PR Expert Group. The work of the PR Expert Group includes the conduction of a gap analysis of available materials and tools and the preparation of a work plan based on priorities. The PR Expert Group will meet up to three times per year in 2016 and 2017.
- To present plans and concepts for the promotion of the new SI to the CIPM.
- To contribute to the development of communication materials and tools prepared by the PR Expert Group and ensure that materials can be used in different cultural contexts and in different languages.
- To make appropriate communication materials available for the promotion of the new SI available to all members.
- To conduct yearly meetings.

Confirmed by CIPM October 2015

A shared understanding of the SI



and of the awareness campaign

2018 provides a unique opportunity to talk about the SI

Be this at the conceptual level to the detail of the changes, there will be audiences that we will be interested and those that should be interested. This is the role of the task force to prepare for this opportunity and encourage the individual NMIs to use the opportunity for their own awareness campaigns.

2018 will facilitate universality of access to the agreed basis for worldwide measurements.

This has been an ambition for the “metric system” that goes back more than 200 years. The 2018 definitions will make it possible for the first time.

These changes will underpin future requirements for increases in accuracy

As science and technology advances, the demands for the accuracy of measurements will continue to increase accuracy. The 2018 definitions will provide for these needs for many years to come.

Principles of engagement

1. Launch the campaign on World Metrology Day 20 May 2018 with in-country campaigns leading up to CIPM meeting in November 2018.
(Encourage NMIs to focus a number of activities during this period.)
2. Use the event to talk about the SI in general terms and to springboard future joint communications programs
3. Members share information freely with other NMIs for use (including light editing or adding local context)
4. Members ensure all materials are fit for purpose, have appropriate copyright and approval
5. BIPM website will act as a central portal for this process
6. Individual NMIs are responsible for translation
7. Individual NMIs are responsible for implementation in their own countries (noting some with close links may wish to join forces)
8. The Task Group will be responsible to approving all materials.